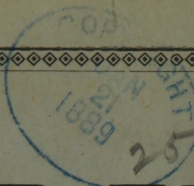


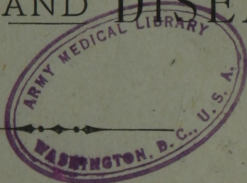
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# OUR EYES

—IN—

HEALTH AND DISEASE.



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## SPECTACLES

THEIR USE AND ABUSE.

THE ARGUS CO., 44 MONTGOMERY ST., JERSEY CITY.

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# OUR EYES

—IN—

HEALTH AND DISEASE.



## SPECTACLES

THEIR USE AND ABUSE.



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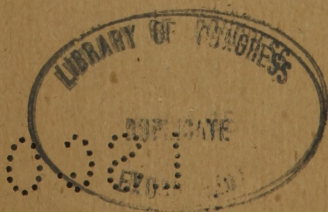
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JERSEY CITY :

The Argus Printing Company, 44 Montgomery Street,  
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# A FEW WORDS ON THE EYE AND ITS FUNCTIONS.

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## INTRODUCTION.

**T**HE Authors, in presenting this small Pamphlet to the Public, have endeavored to make it simple and free from all technical terms. This merit, it is hoped, may render it exceptionally popular and useful.

The growing prevalence of weak sight in this country, both in children and in adults, would seem to make a wide knowledge of the eye, and how to preserve it, of some importance. To take proper care of our eyes is to do what we can to avoid such diseases and weaknesses of the eyes as are avoidable. But to do this efficiently we must know something about the eye and its diseases and weaknesses; we must know what certain feelings mean, the various causes of pain and fatigue, and why the eye is so often subject to fatigue and pain. We cannot afford to give up the entire use of our eyes because they ache, nor can we afford wholly to disregard ominous symptoms, lest we run the risk of impairing sight or losing it. We wish to use our eyes, to preserve our sight to the last, and to avoid all avoidable diseases.

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## THE SYMPTOMS OF WEAK SIGHT AND WHEN IT CAN BE RELIEVED BY THE USE OF THE AQUA CRYSTAL PERISCOPIC SPECTACLES.

The first symptom is fatigue of the eyes during or after reading, writing, sewing, painting, and similar work in the evening. Very soon the same fatigue is noticed after similar

occupations during the day when light is good. After a time the same feeling comes on immediately upon attempting to read or sew, and if disregarded, pain and confusion of vision follow. Letters appear to run together, lines are blurred and indistinct, and continued use of the eyes in reading becomes painful. If we then look up across the room, or in the distance, quick relief comes, and vision is as clear and distinct as possible, but an attempt to read again brings a return of pain and confusion of sight.

In order that persons may judge for themselves when their sight may be preserved by the use of spectacles, an attentive consideration of the following rules will be sufficient—

- 1st. When it is necessary to remove small objects to a considerable distance from the eye in order to see them distinctly.
- 2d. When more light than formerly is required, as, for instance, to place the light between the eyes and the object.
- 3d. If looking at, or attentively considering, a near object, it suddenly becomes confused and appears to have a kind of mist before it.
- 4th. When the letters of a book run into each other, and hence appear double or treble.
- 5th. If the eyes are so fatigued by a little exercise that it is necessary to shut them from time to time, to relieve them by looking at other objects and rubbing them.

## DISEASES OF THE EYE,

From their great variety and frequent occurrence, present a claim to a careful and assiduous investigation, perhaps more urgent than that of any other organ.

The peculiar structure of the eye, its frequent exposure to impure gas, and other strong artificial lights, call loudly for the diligent use of all the resources of science to devise means for its protection and preservation.

The Authors having given much time and labor to the study of the eye, theoretically and practically, do not hesitate in saying, from cases that have come under their notice, that if greater attention were paid to general health, and to judiciously selecting glasses to assist the eye as soon as required, there would be fewer operations and less work generally for the oculist.

Light is the agent through the medium of which external objects make their impression on the sense of sight. Strong lights pain the eyes, cause them to be bloodshot, and confuse vision. In almost every kind of artificial light there is an excess of the yellow over the violet rays, to the great injury of those eyes that are subject to such influences. To counteract which "neutral tinted glasses should be used."

Many people have a great aversion to wearing spectacles until it is absolutely impossible to do without them. This is a most deplorable mistake, with, too often, serious consequences, and after over-working and straining their eyes are obliged to begin with a much stronger pair of spectacles than would have

been necessary for years to come, if timely assistance had been given. That this is correct is fully proved by statistics from our Ophthalmic Hospitals, which show that the disease most frequently treated is "Amblyopia," the cause of which is over-work at night, and by strong artificial lights. On the other hand, those engaged in occupations said to provoke injury, by working with concentrated light and powerful magnifiers, such as engravers, watchmakers, and a large number of persons who, for hours together, use microscopes, rarely complain of their eyes; but, as a rule, they preserve the sight until a late period in life.

Whilst the morbid state of the anterior segments of the eyeball is sufficiently accessible to objective exploration by the naked eye or merely by the use of a magnifying glass, that of the posterior segment comprising the vitreous body, retina and choroid, have, until the introduction of the Ophthalmoscope, been but very little known. With surgeons it was, at best, guess work, they could only judge by external appearances, which were at all times very uncertain.

Jabez Hogg, M.R.C.S., etc., in his interesting work on the Ophthalmoscope, after speaking of diseases most frequent in the eye, has the following passage. "It must be admitted that these remarks most forcibly apply to a certain class of eye diseases hitherto 'huddled' under the names of Amaurosis, Glaucoma, etc., the treatment of which is very often mistreatment, and frequently places those maladies in the list of incurables." It must, however, be remembered that his remarks refer to a period when the Ophthalmoscope was not in use.

Dixon in his "Practical Study of the Diseases of the Eye," says—"Amaurosis implies no ascertained disease, it is only a word expressive of our own ignorance as to the cause of our patients' blindness."

From these and many similar quotations which could be made from works of really clever and eminent men, in the profession, it will clearly be seen that the clever and conscientious optician is the first to be sought when the eye first gives notice that it is no longer conveniently able to fulfil the duties it is called upon to perform. Great caution should, however, be exercised against the many spurious and cheap articles pushed into the market at low prices, badly made from the commonest glass, full of prismatic colors, which, however, cannot always be detected by the unpractised eye, but nevertheless have a most injurious influence.

## DEFECTS IN VISION.

**MYOPIA.**—Short-sighted persons generally complain that, although their eyes are able to distinguish the smaller objects near at hand, they cannot see well at a distance. This depends



upon the fact that the refracting power of the eyes is too strong, or that the antero-posterior axis of the eyeball is too long, so that the rays of light are brought to a focus before reaching the bacillar layer of the retina. The consequence is that distant objects do not appear clear and sharply defined, but indistinct and blurred. In order, therefore, to improve the vision for distant objects, those persons so affected often acquire the habit of nipping their eyelids together. MYOPIA generally occurs at an early period of life, is sometimes acquired and not unfrequently hereditary. This defect can only be corrected by properly selected concave glasses.

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## **PRESBYOPIA.**

The first symptoms of Presbyopia (farsightedness) are that small objects (small type, fine needlework, etc.), cannot with ease be seen so clearly as before, but for distant objects vision is perfect. In order to see minute objects more clearly, they have to be removed further from the eye, or seen by a brighter light. But as the retinal images of these fine objects are very small, on account of the distance at which they are held, a difficulty will soon be experienced in clearly distinguishing them. The print, for instance, will get indistinct and confused, and the eyes become fatigued and aching. This defect is caused by the decrease of the humors of the eye, and the loss of activity in the ciliary muscle. The crystalline lens also becomes more firm and flattened with advancing years, and in consequence of this increased consolidation the amount of muscular action cannot produce the same change in the form of the lens as formerly. In this case no time should be lost, but suitable convex glasses selected as soon as the slightest inconvenience is felt. This defect sometimes increases very rapidly if speedy assistance is not given to the eye. Many, through a foolish shame or prejudice, have had to take to glasses ordinarily only used by those who have undergone an operation.

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## **HYPERMETROPIA.**

By this term is meant that peculiar condition of the eye in which the refractive power is too low, or the optic axis too short, so that the focal point of the dioptric system lies behind the retina, and, therefore, when the eye is at rest the rays are not brought to a focus upon the retina, but behind it. This is the reverse to MYOPIA.

The Hypermetropic eye is small and flat, and although its dimensions are less, this is more particularly and markedly the



case in the antero-posterior axis. The eye does not appear to properly fill out the palpebral aperture, and the posterior portion of the eyeballs is flat and compressed, the expansion of the retina is less, and the optic nerve smaller with a less number of fibres. This, and other relative defects, such as Asthenopia, Muscular Amaurosis, etc. (of which it is unnecessary to speak, as they have the same effect and more or less the same cause), can only be relieved by the proper use of convex glasses.

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## CATARACT.

This term denotes opacities of the crystalline body. Sometimes it has its seat in the crystalline capsule, the lens, or vitreous humor. The capsule is subject to celloid formations, and those thickened portions of the capsule occasionally enclose opaque objects, which not only themselves obstruct the rays of light, but also have an indirect influence over the parts within the capsule; they modify or wholly prevent the nutritious currents through the capsule, and bring about most important changes, in the superficial fibres of the lens. These alterations are attended with a loss of transparency. Persons of all ages are subject to Cataract, but those of an advanced age more so than at an earlier period of life, and it is frequently associated with Heart Disease. Opacity of the lens generally begins in a very unmarked manner, and increases slowly for months, and perhaps years. As soon as discovered, eyes so affected should be assisted, and the defect, perhaps, checked by the use of Spectacles; and even when an operation has been performed it is mostly found necessary to use cataract lenses.

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## HOW TO RELIEVE OR PREVENT WEAK SIGHT.

Persons having a tendency to weakness of sight or those experiencing unusual fatigue of the eyes in reading or similar occupations requiring close vision, should carefully observe the following rules:—

- 1st. Cease to use the eyes for a time, and look away from the work, when sight becomes in the least painful, blurred or indistinct. After perfect rest for a moment, or longer, work may be resumed, to be discontinued as before when the eyes feel again fatigued.
- 2d. See that the light is sufficient, and that it falls properly upon your work. Never sit facing the light—it should fall upon the work from above and behind. Failing this, it may fall from the side. Never use the eyes at twilight; any artificial light for the evening is good if it is brilliant enough and shady; a flickering gaslight is injurious. When artificial light is at all painful, it is safer to read or write with *Neutral Tinted Spectacles*.
- 3d. Never read in railway Trains or Omnibuses. It requires too great an exertion of the accommodative power to keep the eyes accurately focussed and fixed on the letters. Never read when lying down—it is

too fatiguing for the accommodative power. Many a tedious case of weak sight has been traced to the pernicious habit of reading in bed after retiring for the night.

- 4th. Do not read much during convalescence from illness. Before the muscular system generally has quite recovered its healthy tone we ought not to expect the muscles of accommodation to bear the continuous use to which they are subjected in reading or writing. We cannot be sure that the delicate muscles of the eye are in a condition to be used until the muscles of the leg and the arm have regained their strength and firmness.
- 5th. The General Health should be maintained by a good diet, sufficient sleep, air, exercise, amusement, and a proper restriction of the hours of hard work. One ought not to expect strong eyes in a body weakened by bad habits or an injudicious amount of labor. Bright gas lights in crowded rooms, and the impurity of air in such places, are especially to be avoided.
- 6th. Take plenty of sleep. Sleep is a sovereign balm for those who suffer from weak sight. Retire early and avoid the painful evening light.

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## WHAT RESULTS IF NO ATTENTION IS PAID TO THE WEAK SIGHT.

If the symptoms of pain, confusion of vision, dread of light and of all use of the eyes continue, and no measures are taken to ameliorate or remove them, there is danger of the eyes not only becoming nearly useless, but that they may finally get so sensitive and irritable that ordinary daylight cannot be borne without pain and discomfort. When weak sight has been allowed to progress for years, it sometimes intensifies to such a degree that one finds a darkened room the only really comfortable place, dark blue or smoke-colored glasses not affording a sufficient protection from the light.

Severe cases of weak sight are tedious and difficult to cure, and particularly so if of years' standing, but recent cases are curable.

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## WHEN TO BEGIN WEARING GLASSES.

The adoption of suitable glasses should not be neglected after the symptoms of old sight are noticed, especially during the early evenings. Nothing is gained by waiting, and much may be lost. We lose, in the first place, a great deal of amusement and instruction from the necessity of giving up our evening reading, avoiding small print, resting our eyes, and neglecting fine work of all kinds. In the beginning these interruptions in our way of life are not so serious and frequent as to give much annoyance; but as the old sight increases, they become of importance. In the second place, and of greater moment, is the risk we run of straining and fatiguing the accommodative power of the eyes, and so causing weak sight. In these days of weak sight and eye-glasses there need be no fear that

the adoption of glasses will be interpreted as a confession of old age. Sight becomes weak very early—much earlier than forty in most over-sighted eyes—and this flat formation of the eye is more common than any other. Frequently, even in the best formed eyes, ill-health, nervous debility, or a constant and severe use of the vision in fine work or night work, will develop the symptoms of old sight as early as the age of twenty-five or thirty. All things being equal, a farmer, if he is not studious, may postpone the use of glasses longer than a professional or literary person, or any one who reads a great deal. Nothing, however, is gained by postponement of wearing Spectacles; the eyes are not made stronger, and are likely to be made weaker. The relief to the eyes in reading and sewing which follows properly fitting glasses is very remarkable. A Patient of ours had for years suffered from weak sight, weak eyes, inflamed eyelids, headache and depression, and had tried all kinds of relief but the right kind. Properly fitting glasses gave her good sight, and as a consequence of this her other ills were banished.

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## SPECTACLES.

The Spectacles which are generally used for the purpose of correcting some optical defect in the eye are either *concave* or *convex* lenses, or a combination of both. Care should be taken that the Spectacles fit accurately, that the glasses are on the same level, so that one is not higher than the other, that they are sufficiently close to the eyes, and the centre of each glass exactly opposite the centre of the pupil. If these points are not attended to, the glasses act as prisms, and give rise to DIPLOPIA or a correcting squint, and the latter may even become permanent if their use is persisted in. Single Eye-glasses should not be used as a rule, as they often lead to weakness of the other eye from disuse.

In preference to the ordinary double convex and double concave lens, the Authors have great confidence in recommending their Aqua-Crystal Periscopic Spectacles.

The most perfect vision with Spectacles is produced when the eye looks in the direction of the axis of the lenses, and more or less imperfection always attends oblique vision through them. Persons who use Spectacles, therefore, generally turn the head, while those whose sight does not require such aid merely turn the eye.

To diminish this inconvenience, use the minisci, or concave-convex lenses.

The effect of these, as compared with double convex or double concave lenses is, that objects seen obliquely through them are less distorted, and consequently that there is a greater



freedom of vision by turning the eye without turning the head, from which property they are called periscopic.

The sense of dazzling of which many complain, when their eyes are exposed to bright light, is more efficiently relieved by blue-tinted glasses. It is a fact that the orange rays are most irritating to the retina, and, as blue excludes the orange rays, it follows that this is the proper tint for such glasses.

Those who require Spectacles for reading, writing, etc., and can see distant objects without them, should use the Periscopic Pantoscopic Spectacles.

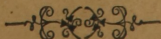
Although clear and correct lenses are the first object, the frames also form an essential part. They should not be made too light, as they often lose their parallelism, and, therefore, should be sufficiently strong to prevent this. Although rarely attended to, this is of great importance, because, unless the pupil of the eye looks through the centre of the lens, clear vision is impossible.

For elderly people who wear glasses to correct old sight, Spectacles are usually preferred to eye-glasses, still, for occasional use, Folders, suspended around the neck by a cord, are always at hand, and quickly adjusted upon the nose. For long periods of reading, writing, or sewing, Spectacles are more comfortable.

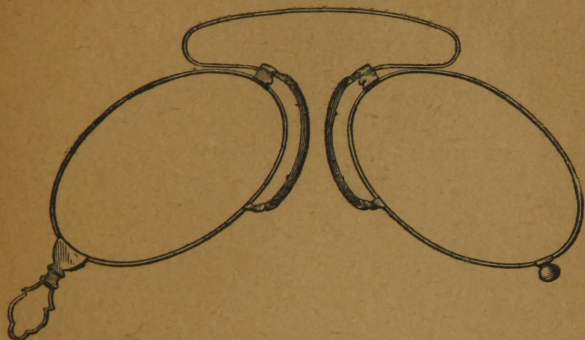
In conclusion, in handing this little work to the public, we beg to call attention to the fact that our glasses are optically clear, ground with mathematical correctness, and the frames in which they are mounted are clearly balanced and angled, and made from the best steel.

Having been before the public for a number of years, our Periscopic Aqua-Crystal Glasses are generally known, but of late years we have introduced them further, and they can now be had in almost every place, large and small, in the World. In order to ascertain the approximate focus, the "Optometer," on Dr. Smee's principal may be used, or the graduated test type on the other side will be found an easy and efficient guide to ascertain the strength of glass required.

The Authors strongly recommend their improved adjustable Folder, which possesses all the advantages of a Spectacle without any of the defects of an ordinary Folder, the use of which is condemned by many oculists, on account of their position on the nose not allowing the eye to look through the centre of the lens. Ladies also complain of their touching the eyelashes. Both of these defects are obviated by the adjustable nose-pieces; and as these latter are open at top and bottom, they relieve the nose of all pressure.







# The Periscopic Aqua-Crystal SPECTACLES.

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*The Following are a Few of the Numerous*

## TESTIMONIALS

*We are daily Receiving from Medical men, etc.*

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From SAMUEL HITCH, Esq., M.D.,

3 GRAND PARADE, Eastbourne.

GENTLEMEN.—I have worn Spectacles at least 50 years, and I have never found any to which my eyes adapted themselves so readily and so pleasantly as these do. They appear to me to render the type clearer, and by artificial light they certainly communicate a sense of coolness.

Yours, etc.,

SAMUEL HITCH, M.D.

From ROBERT COOKE, Esq., M.R.C.S., L.C.A.,

INFIRMARY, Newport, Mon.

I have great pleasure in giving my opinion of your "Aqua-Crystal" Spectacles. I have used them for over eight hours at a time, and with gas light; they have never caused my eye to ache in the slightest degree; the print has been clear through the whole of the time, and no heat or over-exertion has occurred. I have, therefore, the satisfaction now of having a perfect glass.

From SPENCER T. HALL, Esq., M.D., P.L.D. M.A., Burnley.

GENTLEMEN.—I have no hesitation in testifying to the great comfort I have derived from the use of your "Aqua-Crystal" tinted glasses. The sense of coolness and clearness to overwrought eyes is remarkable.

I am yours truly,

SPENCER T. HALL.

From W. F. LAURIE, Esq., M.D., Dunstable.

GENTLEMEN.—I beg to say I have found your Spectacles most serviceable to me; far better than any I have ever had before, and I shall confidently recommend them to my patients.

Yours truly,

W. F. LAURIE.

Oct. 16, 1878.

From JOHN WORRAL, Esq., M.D., Adare, Limerick.

GENTLEMEN.—I am very pleased with the "Periscopic" Aqua-Crystal Convex Glasses of a blue tint, which I had from you recently; no matter how long I may be reading, they never weary the sight, or cause heat with Epiphora, which invariably attended the use of other glasses.

Faithfully yours,

JOHN WORRAL.

From W. WALLACE, Esq., M.D.,

TOWIE COTTAGE, Turriff, N. B.

GENTLEMEN.—The Gold Spectacles came duly to hand and suit me very nicely.

Yours truly,

WILLIAM WALLACE, M.D.

WM. HOGGAN, Esq., M.D., H.M., DOCKYARD, Sheerness, writes:

It affords me much pleasure to state that the pair of Spectacles I had from you suit me exactly, and are all that could be wished.

From THOMAS SHELDON, Esq., M.D.,

125 CORNWALL ROAD, Notting Hill, London, W.

GENTLEMEN.—I was very much pleased with one of your Registered sight tests, and shall be pleased to recommend my patients to you.

Faithfully yours,

THOMAS SHELDON.

From J. W. DREW, Esq., M.D., Surgeon,

OPHTHALMIC HOSPITAL, Newport.

Having given the glasses a fair trial, I have now much pleasure in reporting thereon. Results have verified all you predicted, and I am more than satisfied. My only regret is that I had not your help long since. I shall strongly recommend you to my patients.

From the Very Rev. WM. RONAN, S. J.,

COLLEGE OF THE SACRED HEART, Crescent, Limerick.

GENTLEMEN.—The Periscopic Convex Glasses of a blue tint, which I have purchased at your establishment give me great comfort. I use them constantly in reading and writing, and I find them most satisfactory.

Believe me, faithfully yours,

W. RONAN.

From the Very Rev. JOHN HALPIN, P.P., Rathkeale.

I have reason to be thankful for the Spectacles I had from you, they are most comfortable by day and artificial light.

Yours very truly,

JOHN HALPIN, V. G.

From J. TIRRELL, Chemist, Market Square, Hanley.

GENTLEMEN.—A case has just come under my notice proving beyond all doubt the great advantage you claim for the "Periscopic Aqua-Crystal" Spectacles. I have to-day sold a pair of No. 10 Spectacles to a customer who, two years since, required your No. 8; last year he had No. 9. He is, therefore, to-day wearing Spectacles two sights younger than what he required two years ago; at once showing to what a large extent his sight has been benefited by the use of your Spectacles.

Yours very truly,

J. TIRRELL.

From J. THOMPSON, Secretary of the Working Men's Co-operative Society (Limited),

Portland Street and Church Street, Ashton-under-Lyne.

GENTLEMEN.—I am delighted with the pair of Spectacles you have made for me, they suit me admirably. I never met with a pair before that I could see a long distance with, and yet be able to work in without inconvenience.

They have in short so lengthened my range of vision, that outside appears almost like a new world, and things near are so clear and distinct that I can work with more comfort and ease. Yours truly, J. THOMPSON.

From JOHN TOMLINSON, Esq., HAYDN TERRACE, Blackburn.

GENTLEMEN.—The "Periscopic Aqua-Crystal" Spectacles give me great satisfaction. They suit better than any I have used hitherto. I can confidently recommend them, especially for reading by gaslight. Yours faithfully, JOHN TOMLINSON.

Oct. 20, 1878.

From Col. E. VESEY BROWNE, DROMARA HOUSE, Rathkeale.

GENTLEMEN.—I have had two pairs of *periscopic* Spectacles from you, and am happy to bear testimony to their efficacy. I find that they cause less strain on the eyes than any glasses I have ever used, and I wear them with great comfort. Yours, etc., E. VESEY BROWNE.

Late Lieut.-Col. 60th Rifles.

From WILLIAM WHALLEY, Esq., Latchford, Warrington.

GENTLEMEN.—I have great pleasure in bearing testimony to the efficiency of your "Periscopic" Spectacles. I have been short-sighted all my life, and worn spectacles for upwards of 20 years and I have had Spectacles from some of the most noted Oculists and Opticians in London, Liverpool and Manchester, but I never succeeded in obtaining a pair which rendered me any assistance comparable with that which I receive from yours; and, I may add, I wear them with equal ease and comfort by day and night.

Yours truly, WILLIAM WHALLEY.

From JOHN COWIE, M.P.S., Falkirk.

I am pleased to say that your Spectacles are a very great boon, and I can strongly recommend them.

From JAMES J. O'DEA, M. D.

STAPLETON, Richmond Co., N. Y., Nov. 16, 1888.

GENTLEMEN:—I am very much pleased with your Aqua-Crystal Spectacles, and can unreservedly recommend them to the public.

Yours truly,

JAMES J. O'DEA, M. D.

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GEO. ELLIOTT & CO.,

IMPORTING OPTICIANS,

38 MAIDEN LANE, NEW YORK.

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WHOLESALE ONLY.



# TEST TYPE

FOR THE

## Periscopic Aqua-Crystal Spectacles.

THIS TEST	5
TYPE WILL ENABLE	6
THE READER TO	7
Form a Correct	8
JUDGMENT OF WHAT	9 to 10
Glasses he Requires.	11 to 12
Place it with a Good Light;	12 to 14
At the Proper Reading Distance,	14 to 16
Which is about 14 inches. Select the	16 to 29
<i>Smallest type that can be Distinctly read with</i>	18 to 20
Ease. The corresponding figures in the margin	20 to 24
Will show the focus required. The best Lenses,	24 to 30
Which being periscopic, give a larger field of vision,	30 to 36
With less strain on the eye than the convex lenses.	36 to 40
These lenses are recommended by the faculty for night use,	40 to 48
especially by gas light. Use the Aqua-Crystal Tinted Spectacles.	50 to 60



# AQUA CRYSTAL SPECTACLES.

Da das Auge das zarteste Organ des menschlichen Systems ist, so sollte es nothwendiger Weise mit der größten Sorgfalt behandelt werden. Im Gegentheil, wird es zu oft auf die leichtsinnigste Weise mißbraucht, und ebenso oberflächlich wie unwissenschaftlich behandelt, wenn Erholung zum Schutze und zur Erhaltung nothwendig wird um Schädigung desselben zu verhüten.

Damit man selbst urtheilen kann, ob das Augenlicht durch den Gebrauch von Brillen erhalten werden muß, ist eine sorgfältige Beachtung der folgenden Regeln hinreichend:

1. Wenn es nothwendig ist, kleine Gegenstände weit vom Auge weg zu halten, um selbige deutlich zu erkennen.
2. Wenn mehr Licht als früher nothwendig ist, um z. B. das Licht zwischen den Gegenstand und die Augen zu bringen.
3. Wenn beim Betrachten, oder aufmerksamen Ueberlegen eines nahestehenden Gegenstandes, derselbe plötzlich verschwimmt, und es scheint als wäre ein Nebel vor demselben.
4. Wenn die Buchstaben eines Buches ineinander laufen und deswegen doppelt oder dreifach erscheinen.
5. Wenn die Augen nach geringer Anstrengung so ermüdet werden, daß es nothwendig wird dieselben von Zeit zu Zeit zu schließen, oder die Blicke auf andere Gegenstände zu lenken, oder sie zu reiben.

## Wie man die Augenschwäche bessert oder verhindert.

Diejenigen, welche Neigung zur Augenschwäche haben, oder beim Lesen oder anderer scharfes Sehen erfordernder Thätigkeit ungewöhnliche Ermüdung empfinden, sollten sorgfältig folgende Regeln beachten:

1. Man höre eine Weile auf, die Augen zu gebrauchen, und blicke von der Arbeit auf, wenn das Sehen schmerzhaft, verwischt oder undeutlich wird. Nach vollkommener Ruhe für einen Moment oder länger, kann die Arbeit fortgesetzt werden und wiederum wie vorher aufgegeben werden, wenn das Auge von Neuem ermüdet fühlt.

2. Man sehe darauf, daß genügend Licht da ist und daß es gehörig auf die Arbeit fällt. Sitze nie dem Lichte gegenüber — es sollte von

hinten oder von oben auf die Arbeit fallen. Wenn dies nicht möglich, so mag es von der Seite kommen. Gebrauche nie die Augen in der Dämmerung; irgend ein künstliches Licht kann Abends gebraucht werden, wenn es nur hell genug ist; ein flackerndes Gaslicht ist schädlich. Wenn künstliches Licht überhaupt schmerzhaft ist, so ist es besser beim Lesen oder Schreiben "Neutral" gefärbte Brillen zu gebrauchen.

3. Man lese nie in Eisenbahnwagen oder Omnibussen. Es bedarf einer zu großen Anstrengung der Anpassungskraft, um das Auge in genauer Entfernung und auf die Buchstaben gerichtet zu erhalten. Man lese nie im Liegen — dasselbe ist zu ermüdend für die Anpassungskraft. Manch ein lange andauernder Fall von geschwächten Augen kann auf die verderbliche Gewohnheit zurückgeführt werden, im Bette zu lesen nachdem man sich für die Nacht zurückgezogen hat.

4. Lies nicht viel während der Erholungszeit nach einer Krankheit. Ehe das Muskelsystem im Ganzen seine volle Kraft wieder erlangt hat, sollten wir nicht erwarten, daß die Anpassungsmuskeln den steten Gebrauch ertragen können, zu welchem sie während des Lesens oder Schreibens ausgesetzt sind. Wir können nicht sicher sein, daß die zarten Muskeln des Auges in gebrauchsfähigem Zustande sind, bis die Muskeln der Beine und Arme ihre volle Kraft und Festigkeit wieder erlangt haben.

5. Die allgemeine Gesundheit sollte erhalten werden durch gute Diät, hinreichend Schlaf, Lust, Bewegung, Unterhaltung und gehörige Beschränkung der Stunden harter Arbeit. Man sollte nicht starke Augen in einem durch schlechte Gewohnheiten oder Ueberarbeit geschwächten Körper erwarten. Stielles Gaslicht in überfüllten Räumen sowie unreine Luft an solchen Orten sind hauptsächlich zu vermeiden.

6. Man schlafe viel. Schlaf ist der all-heilende Balsam für die an schwachem Gesicht Leidenden. Man ziehe sich früh zurück und vermeide das schmerzhaftc Abendlicht.

### **Was geschehen kann, wenn man geschwächte Augen unbeachtet läßt.**

Wenn die Symptome des Schmerzes, des unbestimmten Sehens, der Lichtscheue und der allgemeinen Unlust zum Augengebrauch andauern, und keine Maßregeln genommen werden, dieselben zu lindern oder aus dem Wege zu räumen, so ist Gefahr vorhanden, daß die Augen nicht nur nahezu nutzlos, sondern auch, daß sie schließlich so sensitiv und reizbar werden, daß man das gewöhnliche Tageslicht nicht mehr ohne Schmerz und Unbequemlichkeit ertragen kann. Wenn man die Schwächung der Augen hat Jahre lang angehen lassen, so steigert sich dieselbe zuweilen bis zu einem solchen Grade, daß man sich nur in einem dunklen Zimmer wohl befindet, da blaue oder rauchfarbene Gläser keinen hinreichenden Schutz vor dem Lichte gewähren.

Schwere Fälle von schwachen Augen sind langwierig und schwer zu heilen, und besonders wenn schon Jahre andauernd; heilbar aber sind selbige in den ersten Stadien.

# LUNETTES EN CRISTAL D'EAU.

(AQUA CRYSTAL SPECTACLES.)

L'œil est l'organe le plus délicat du système humain et devrait être, par conséquent, traité avec les plus grands égards. Le contraire n'arrive que trop souvent. On l'use avec la plus grande étourderie et il est traité avec négligence et insouciance professionnelle, alors qu'il exige du soulagement, dans l'intérêt de sa protection, et des préservatifs contre son altération.

Toute personne peut juger par elle-même, à quel moment il devient opportun de protéger la vue par des lunettes. A cet effet, il suffit de se rendre compte exactement des points suivants :

1°. S'il est nécessaire, afin de voir distinctement de petits objets, de les éloigner à une grande distance de l'œil.

2°. Si la vue exige une plus grande quantité de lumière qu'auparavant, si par exemple, on est obligé de placer la lumière entre les yeux et l'objet qu'on veut voir.

3°. Si, en regardant ou en fixant un objet rapproché, ce dernier devient confus et semble être entouré d'une espèce de brouillard.

4°. Si les lettres d'un livre se confondent sous le regard et apparaissent en double ou en triple.

5°. Si, enfin, par suite d'un court usage, les yeux sont tellement fatigués qu'on est obligé de les fermer de temps en temps et de les soulager, en les portant sur d'autres objets et en les frottant.

## AFFAIBLISSEMENT DE LA VUE—MOYENS DE LE PRÉVENIR ET D'Y RÉMÉDIER.

Les personnes, dont la vue dénote la disposition à s'affaiblir, ou celles qui ressentent une fatigue inusitée aux yeux en lisant ou en s'adonnant à des occupations demandant une attention soutenue, devraient se conformer soigneusement aux prescriptions suivantes:

1°. Aussitôt que le regard provoque des douleurs ou commence à devenir voilé et indistinct, cessez immédiatement l'usage des yeux, en les détournant de l'ouvrage qui vous occupe. Remettez-vous au travail après un court repos, pour cesser de nouveau, aussitôt que la fatigue se représente.

2°. Prenez soin d'avoir toujours de la lumière en quantité suffisante et tombant de la propre manière sur votre ouvrage. Evitez



d'avoir la lumière en face. Celle-ci devrait toujours venir d'en haut ou de derrière, au pis-aller, de côté. N'employez jamais vos yeux au crépuscule. Toute lumière artificielle est bonne le soir, pourvu qu'elle soit suffisamment brillante et couverte d'un abat-jour ; la lumière tremblante du gaz est nuisible. Quand la lumière artificielle offusque la vue le moins du monde, il est à recommander de porter des lunettes à teinte neutre en lisant et en écrivant.

3°. Ne lisez jamais dans les wagons de chemin de fer et les omnibus. Cette occupation exige un effort trop grand pour fixer les caractères et observer, en même temps, le juste foyer des rayons lumineux. Gardez-vous également de lire quand vous êtes couché, l'effort qu'il importe de faire pour fixer exactement le regard étant trop fatigant. En nombre de cas, l'affaiblissement de la vue a eu son origine dans l'habitude pernicieuse de lire le soir dans le lit.

4°. Lisez aussi peu que possible quand vous relevez d'une maladie. Aussi longtemps que le système musculaire n'a pas complètement repris sa vigueur, on ne devrait pas s'attendre à voir les muscles de l'œil supporter l'effort continu auquel ils sont soumis, quand on lit ou écrit. L'on ne saurait être sûr que les muscles délicats de l'œil soient en état d'être usés, avant que ceux de la jambe et du bras n'aient recouvert leur force et leur vigueur.

5°. Une bonne diète, un nombre suffisant d'heures de sommeil, de l'air, des exercices corporels, des récréations et une réduction appropriée du temps dévoué au travail devraient concourir au maintien d'un état de santé générale. Dans un corps affaibli par de mauvaises habitudes ou un travail excessif, on ne peut pas s'attendre à trouver des yeux forts. Il importe surtout d'éviter la lumière éclatante du gaz dans des locaux remplis de monde et l'atmosphère impure qu'on y respire.

6°. Dormez votre soûl. Le sommeil est le meilleur des baumes pour ceux qui souffrent d'une vue faible. Couchez-vous de bonne heure et évitez la lumière irritante du soir.

## SUITES FUNESTES DE LA NÉGLIGENCE EN CAS D'AFFAIBLISSEMENT DE LA VUE.

Si les symptômes de douleur, de confusion dans le regard, d'aversion contre la lumière et l'usage des yeux en général continuent, sans que des mesures soient prises pour les écarter complètement on en partie, on court le risque de voir les organes de la vue devenir, non seulement d'une utilité très restreinte, mais à la fin tellement sensibles et irritables qu'ils ne peuvent supporter la lumière du jour qu'avec malaise et douleur. Pour peu que l'on permette à l'affaiblissement de la vue d'aller son train pendant des années, il arrive à un degré tel qu'on ne trouve du confort que dans un appartement sombre, les lunettes en verre bleu ou enfumé n'offrant plus une protection suffisante contre la lumière.

Les cas invétérés d'affaiblissement de la vue sont longs et difficiles à guérir, tandis que la maladie est curable au début.



# ESPEJUELOS DE CRISTAL NEUTRO.

Pues que el ojo es el órgano mas delicado del sistema humano, parece que debería ser tratado siempre con suma delicadeza. Pero á menudo sucede todo lo contrario. No ya se le descuida y maltrata á posta, sino que sin necesidad ni provecho alguno, y cuando precisamente la desmejora pide alivio, conservacion y mayor cuidado.

Á fin, pues, de que las personas puedan juzgar por sí mismas, cuándo han de proteger la vista mediante el uso de buenos espejuelos, sometemos respetuosamente á su atenta consideracion las siguientes sencillas reglas que creemos de fácil y utilísima observancia :

1°. Cuando quiera que sea necesario remover objetos pequeños á larga distancia para verlos distintamente.

2°. Cuando para verlos bien se requiera mas luz de la que habia antes, por ejemplo, colocar la luz entre la vista y los objetos.

3°. Cuando fijada la vista en un objeto cercano, se nos oscureciese de repente y pareciese que se interpone un velo ó niebla.

4°. Cuando las letras del libro que leemos nos parece que se juntan, doblan y triplican.

5°. Cuando tras corto ejercicio se fatigan tanto los ojos que se hace necesario cerrarlos de tiempo en tiempo, se encuentra alivio mirando para otros objetos y entregárselos ligeramente.

## **De Cómo aliviar é impedir la debilidad de la vista.**

Las personas con tendencia á debilidad de la vista, ó aquellas que experimentan desacostumbrada fatiga de los ojos leyendo ú otras ocupaciones que piden atenta visual, deberían observar cuidadosamente las siguientes reglas :

1°. Dejar de leer por algun tiempo y mirar en contraria direccion, apenas se siente el mas minimo inconveniente en la vista, ó que se empaña y apaga. Despues de un descanso más ó menos prolongado, puede resumirse el trabajo y suspenderlo de nuevo tan luego como se sienta fatiga.

2°. Es de tenerse presente que la luz sea suficiente y que alumbre de lleno la obra. Nunca se siente de cara para la luz, la cual debe caer sobre la obra de arriba y por detras. Cuando esto no se pueda, puede caer de costado. No haga uso nunca de los ojos á la luz del crepúsculo; por la tarde toda luz artificial es buena si es bastante brillante y la cubre una pantalla; al paso que resulta dañosa la luz fluctuante del gas. Y siempre que la luz artificial produzca la menor pena en la vista lo mejor es leer ó escribir con *Espejuelos de color neutro*.

3°. No lea nunca en lós trenes del ferrocarril ni diligencias, porque requiere un esfuerzo grande de la facultad acomodaticia el mantener los ojos en el foco exacto y fijo sobre las letras. Tampoco debe leerse nunca echado boca arriba, porque es muy fatigoso á la facultad acomodaticia de la vision. Al hábito pernicioso de leer de noche echado en la cama, hay que atribuir los muchos casos de debilidad prematura en la vista.

4°. No debe leerse mucho durante la convalecencia de una enfermedad. Antes que el sistema muscular recobre en general saludable tono, no se debe esperar que los músculos acomodativos sufran el continuo uso á que se les somete con la lectura ó escritura. Ni puede nadie estar seguro que los músculos delicados de los ojos se hallen en estado de emplearse hasta que los músculos de la pierna y del brazo, vuelvan á tomar fuerza y firmeza.

5°. La salud general ha de mantenerse mediante una buena dieta, suficiente sueño, aire, ejercicio, entretenimiento y conveniente restriccion de las horas de trabajo recio. Cómo ha de esperarse vista fuerte en cuerpo débil por los malos hábitos y la desarreglada suma de trabajo? Son de evitarse, además, la concurrencia á lugares llenos de gente, alumbrados de luces brillantes de gas y de aire viciado.

6°. Duérmase bastante. El sueño es bálsamo soberano para aquellos que padecen de debilidad de la vista. Recogerse temprano y evitar la penosa luz de la tarde, son remedios santos para el cuerpo y para el alma.

### **Resultas de la falta de atencion á la debilidad de la vista.**

Si continúan los síntomas de pena, ofuscacion, temor de la luz y de todo uso de los ojos, y no se han tomado medidas para mejorarlos ó eliminarlos, hay peligro no ya solamente de que sea casi inutil el uso de ellos, sino de que al cabo se vuelvan tan sensibles é irritables que no se pueda ver la luz sin dolor y mal estar. Cuando se ha dejado progresar por años seguidos la debilidad de la vista, á veces llega á tal grado de intensidad que solo se encuentra uno bien en un cuarto oscuro, pues no ofrecen suficiente proteccion del mal estar, los espejuelos de luneta verde ó ahumada.

Los casos graves de debilidad de la vista son tediosos y difíciles de curar, particularmente si son crónicos; los recientes tienen cura.

